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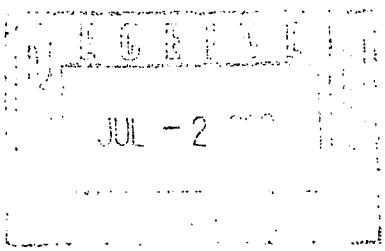
TESTIMONY OF DEWEY MARK

IN SUPPORT OF HITEC 3000

FUEL ADDITIVE WAIVER

Public Docket A-90-16

Air Docket LE 131



Before The

U. S. ENVIRONMENTAL PROTECTION AGENCY
Washington, D.C.
June 22, 1990

My name is Dewey Mark. I recently retired as President of Diamond Shamrock, Inc., an independent refining and marketing company, and I am immediate past chairman of the National Petroleum Refiners Association. After reviewing the waiver application document prepared by Ethyl Corporation for their HiTEC 3000 Performance Additive and submitted to the Environmental Protection Agency on May 9, 1990, I am appearing to encourage the EPA to grant this waiver application. HiTEC 3000 is a safe, effective and economic additive for gasoline. It's use not only increases flexibility in gasoline blending, but also has a beneficial environmental effect on refinery processing by reducing plant emissions, lowering the dependence on aromatics in gasoline, and saving up to 82,000 barrels of crude oil per day.

Having been in the petroleum processing industry for over 38 years, the effectiveness of HiTEC 3000 as an octane improver is well recognized. At a concentration of approximately 0.03 grams per gallon of HiTEC 3000, the average increase in octane quality of a typical unleaded regular gasoline is about 0.9 (R+M)/2 octane number. This octane quality increase is obtained at a cost that is approximately one-third that of refinery processing and even more economical yet when compared to octane improvement costs associated with blending agents such as MTBE, ETBE or ethanol.

The octane quality increase provided by HiTEC 3000 can

allow the refiner to reduce the severity of reforming, a major octane-producing process, which in turn will reduce the aromatic content of gasoline as well as refinery emissions. Lowering the reformer severity also increases the amount of liquid products produced by the reformer which in turn conserves crude oil. A study done by Turner, Mason and Company for Ethyl Corportion indicated that aromatics content of gasoline would decrease with the use of HiTEC 3000 in gasoline and refinery emissions would decrease by 15 million pounds per year.

Perhaps the most important benefit of HiTEC 3000 to the refining industry, as I see it, is the flexibility it gives the refiner in meeting octane quality specifications of gasoline. It only takes a small quantity (about a teaspoon or less per barrel of gasoline) of HiTEC 3000 to increase a gasoline blend by up to 1 (R+M)/2 ON. Hence, HiTEC 3000 represents an additional competitive source of octane for the refiner.

The use of certain oxygenates in gasoline has become an important contributor of octane quality and it appears that they will be required in some metropolitan areas of the United States, in future gasoline. I view the use of HiTEC 3000 as a complement to oxygenated blending agents in both environmental improvement and octane improvement. It is known that the use of oxygenates can reduce emissions of

carbon monoxide and hydrocarbons to a lesser extent while Ethyl Corporation has shown in their 48-car fleet test program that HiTEC 3000 will significantly reduce NOX and CO emissions. The use of both components in gasoline could provide additional reductions in tailpipe emissions.

Ethyl Corporation has conducted test work in their waiver application in support of octane response and compatibility with gasolines containing HiTEC 3000 and oxygenated blending agents. The results of that study show that the gain provided by each component is basically additive when the two are blended together.

Two factors that refiners will have to face in the future as the Federal government continues to pursue cleaner burning gasoline are reductions in vapor pressure and aromatics. Unfortunately, this action has a negative effect on the octane quality of the fuel. HiTEC 3000 can replace some of this lost octane, especially for the small to medium size refineries which do not have as much flexibility as larger refineries.

Finally, the work done by Ethyl Corporation in testing HiTEC 3000 has proven its value in reducing tailpipe emissions, in particular NOX and CO. Overall emissions reduction would be as much as 1.7 billion pounds annually if HiTEC 3000 was used in all gasoline in the United States.

Ehtyl accumulated over 3.5 million miles on 48-cars without any adverse effect on the automobile emission control systems.

Ethyl Corporation has shown that the use of HiTEC 3000 in gasoline will make a positive contribution to a reduction in tailpipe emissions. On the refining side, its use will give the refiner more flexibility in developing "reformulated gasoline." Plus, it offers economic advantages over other methods of increasing octane quality of fuels while, at the same time, it conserves crude oil and can decrease refinery emissions.

I, therefore, encourage approval of its use in U.S. gasolines. Thank you for your attention.

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ENVIRONMENTAL PROTECTION AGENCY

HEARING ON WAIVER APPLICATION FOR HiTEC 3000

STATEMENT OF CONGRESSMAN RICHARD H. BAKER

JUNE 22, 1990

Good morning. I am Congressman Richard Baker from the Sixth District of Louisiana. My district includes Baton Rouge which is the location of the headquarters of Ethyl Corporation Chemicals Group. It is also the location of a number of other chemical and petroleum operations. I am happy to testify on behalf of one of my constituents, but what really motivates my support of this fuel waiver application for HiTEC 3000 is the benefit this product offers for our community.

Like many cities around our country, Baton Rouge suffers from ozone episodes. Already we in Baton Rouge have formed a task force made up of industry, state, and local governments to develop a plan to reduce the frequency and severity of these ozone episodes.

In view of this, I was quite interested to learn that Ethyl Corporation was attempting to obtain approval from EPA to market a product that would reduce automobile emissions of nitrogen oxide by twenty percent. Since nitrogen oxide is a primary contributor to ozone, use of this product could have a substantial benefit for Baton Rouge. A reduction of NOx emissions of this size may allow our city to avoid taking other corrective actions that are more costly and less effective. When I think about the many other cities

around the country that also suffer from ozone problems, the potential benefit of this product for air quality is significant.

In addition to helping improve air quality, this product has a very important economic benefit. Since it produces octane, it reduces the need to process crude oil. Ethyl estimates this could save over 30,000,000 barrels of crude oil each year. This is roughly one half-billion dollars that would not be spent for imported oil each year. Since it is compatible with reformulated fuels, it can play a very important part in reducing air pollution both now and in the future.

I know there are many technical issues that EPA must consider before passing judgment on this application, but I want to reiterate some very important practical ones. Baton Rouge has a problem today. This is a product that can help us today. And it can do so without imposing additional costs or any other burdens on any of our citizens.

In closing, I think we need to have these kinds of products available as we work to find a solution to our air problems, both locally and nationally. The quality of our lives and the very future of our planet, depend upon our ability to meet the goal of environmental protection in a responsible manner. I believe that we must find ways of solving global environmental problems while satisfying the world's growing energy needs. And I believe that products such as HiTEC 3000 can help achieve both goals.

Thank you for your time and consideration on this matter, and if I can provide you with any addition information, please feel free to contact me.